



## *Rice Lake Utilities*

*Electric • Water • Wastewater*

*320 West Coleman Street*

*Rice Lake, WI 54868*

*715-234-7004*

*Fax: 715-236-7934*

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(5050)

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PUBLIC SERVICE

Public Service Commission  
610 N. Whitney Way  
P.O. Box 7854  
Madison, WI 53707-7854  
**Attention: Mr. Scot Cullen, Chief Electric Engineer**

January 27, 2003

RE: In the Matter of Filing Reporting Requirements for Appropriate Inspection and Maintenance, PSC Rule 113.0607(6)

Dear Mr. Cullen:

Enclosed for filing are 3 copies of Rice Lake Utilities report to the commission, submitted every two years, showing compliance with its Preventative Maintenance Plan.  
Please contact me if you have any questions or concerns on the material submitted.

Sincerely,

Scott Reimer, General Manager/CEO  
Rice Lake Utilities

Enclosures

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JAN 29 2003

Electric Division

# **TWO YEAR REPORT DOCUMENTING COMPLIANCE WITH THE PREVENTATIVE MAINTENANCE PLAN**

**RICE LAKE UTILITIES**

**FILING DEADLINE  
FEBRUARY 1, 2003**

January 27, 2003

Scott Reimer, General Manager/CEO

320 West Coleman Street

Rice Lake Wisconsin 54868

715-234-7004

[rlu@chibardun.net](mailto:rlu@chibardun.net)

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Electric Division

This report format was prepared by the MEUW work group for PSC Rule 113.0607 for use by the 82 municipal electric utilities in Wisconsin and endorsed by PSC staff as meeting the requirements of Rule PSC 113.0607.

## **I Reporting Requirements:** PSC 113.0607(6) states;

Each utility shall provide a periodic report to the commission showing compliance with its Preventative Maintenance Plan. The report shall include a list of inspected circuits and facilities, the condition of facilities according to established rating criteria, schedules established and success at meeting the established schedules.

## **II Inspection Schedule and Methods:**

| SCHEDULE:                           | MONTHLY | ANNUAL | EVERY<br>5 YEARS |
|-------------------------------------|---------|--------|------------------|
| Transmission ( $\geq 69\text{Kv}$ ) |         | X      | X                |
| Substations                         | X       | X      |                  |
| Distribution (OH & UG)              |         |        | X                |

METHODS: Five criteria groups will be used to complete the inspection of all facilities.

1. IR – infrared thermography used to find poor electrical connections and/or oil flow problems in equipment.
2. RFI - Radio Frequency Interference, a byproduct of loose hardware and connections, is checked using an AM radio receiver.
3. SI – structural integrity of all supporting hardware including poles, crossarms, insulators, structures, bases, foundations, buildings, etc.
4. Clearance – refers to proper spacing of conductors from other objects, trees and conductors.
5. EC – equipment condition on non-structural components such as circuit breakers, transformers, regulators, reclosers, relays, batteries, capacitors, etc.

Distribution facilities will be inspected by substation circuits on a 5 year cycle such that the entire system will be inspected every 5 years. Inspector instructions for inspecting all facilities and forms are included in the plan.

## **III Condition Rating Criteria**

This criterion, as listed below, establishes the condition of a facility and also determines the repair schedule to correct deficiencies.

- 0) Good condition
- 1) Good condition but aging
- 2) Non-critical maintenance required – normally repair within 12 months
- 3) Priority maintenance required – normally repair within 90 days
- 4) Urgent maintenance required – report immediately to the utility and repair normally within 1 week

#### **IV Corrective Action Schedule**

The rating criteria as listed above determine the corrective action schedule.

#### **V Record Keeping**

All inspection forms and records will be retained for a minimum of 10 years. The inspection form contains all of the required critical information i.e. inspection dates, condition rating, schedule for repair and date of repair completion.

#### **VI Reporting Requirements**

A report and summary of this plan's progress will be submitted every two years with the first report due to the Commission by February 1, 2003. The report will consist of a cover letter documenting the percent of inspections achieved compared to the schedule and the percent of maintenance achieved within the scheduled time allowance.

#### **VII Inspected Circuits and Facilities**

| Circuit # and description                         | Substation       |
|---|------------------|
| <b>All of N1, overhead Res./comm. feeder</b>      | <b>Rice Lake</b> |
| <b>All of N2, overhead industrial feeder</b>      | <b>Rice Lake</b> |
| <b>All of N3, overhead res./comm./Ind. feeder</b> | <b>Rice Lake</b> |
| <b>½ of N15, overhead res./comm./Ind. feeder</b>  | <b>Rice Lake</b> |
| <b>½ of N17, comm./industrial feeder</b>          | <b>Rice Lake</b> |

Base load and peaking generation, less than 50 megawatts per unit in size, is typically subject to pre-operational checks, in addition to checks and maintenance during and after periods of operation. Emergency generation is test run and maintained every week by our on call personnel to confirm its operational readiness.

#### **VIII Scheduling Goals Established and Success of Meeting the Criteria:**

Rice Lake Utilities set a goal and began a complete conversion and rebuild of our distribution system in 1987. We completed the project in 1993. All of our six feeder circuits have been upgraded and are in very good condition. Our reliability is in the 99% range for all of the categories. We have replaced our three phase regulators with single-phase regulator and based on the readings taken weekly, we have accomplished the goal of providing our customers with consistent voltages for each phase. Our substation facilities consist of GE metalclad switchgear. We have properly maintained this system with the appropriate relay calibrations and breaker maintenance. We have utilized the services of the GE service center

located in Appleton WI. They have supplied us with the latest product bulletins by GE and have kept our facilities operating at peak efficiency. Rice Lake Utilities conducts infrared-scanning surveys of the entire distribution system annually. All items no matter how small are corrected immediately. We have also set a goal to replace all of the three wire copper lotlines in our service territory with the appropriate triplexed conductor and replace all of the bolted connectors with compression connectors. To date we are around 90% completed with this project. We are on a 5-year cycle for our tree-trimming program.

### **IX Facility condition – rating criteria:**

To date we have completed inspections on 60% of the distribution system. No major items were found. Any minor items found have been documented and repaired. No items found have contributed to customer outages. We have just completed an engineering study of the entire distribution system and will be making enhancements to the system in 2003 that have been identified. Other projects as result of the study are planned in the near future. For the most part, our system is relatively new, well maintained and in excellent condition.